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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/686,141	10/15/2003	Brian E. Aufderheide	58985US002	6227

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EXAMINER	
RUDE, TIMOTHY L	

ART UNIT	PAPER NUMBER
2871	

NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	**Application No.** 10/686,141	**Applicant(s)** AUFDERHEIDE ET AL.	
	Examiner Timothy L. Rude	**Art Unit** 2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 May 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-38* is/are pending in the application.

4a) Of the above claim(s) *14-19,25,27,29-31,33 and 36* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-13,20-24,26,28,32,34,35,37 and 38* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Claims

Claim 38 is added.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

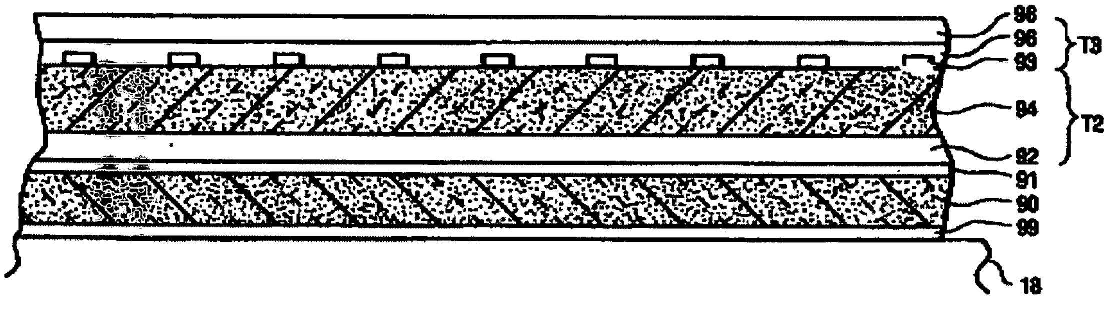
1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-13, 20-24, 26, 28, 32, 34, 25, 37, and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Greanias et al (Greanias) USPAT 5,386,219 in view of Saif et al (Saif) USPAT 6,583,935 B1.

As to claims 1, 21, 32, and 38, Greanias discloses in Figure 5 a touch screen comprising: a PET substrate, 90 [col. 15, lines 40-50, matches Applicant's materials, PET, polyester (plastic), and glass; alternatives of Greanias]; a transparent conductor pattern, 91 [matches Applicant's material, ITO, disposed on the coating, the pattern leaving areas of the coating uncovered [parallel conductor strips, like 93, col. 17, lines 5-50]; and a filler material [92, adhesive, col. 17, lines 48-58 and col. 21, lines 13-25] covering and contacting both the transparent conductor pattern and the areas of the coating uncovered by the transparent conductor pattern [much the same as 96].

FIG. 5



Greanias does not explicitly disclose (1) a coating substantially covering the substrate and (2) said coating has a refractive index that is less than that of the substrate and less than that of the transparent conductor pattern.

Saif teaches the use of a coating [silicon oxide primer layer, col. 7, line 5 through col. 8, line 9] having a refractive index that is less than that of the substrate and less than that of the transparent conductor pattern and good adhesion in order to reduce unwanted reflections when used as a touch panel over a display [Abstract].

Saif is evidence that workers of ordinary skill in the art would find the reason, suggestion, or motivation to add of a coating [silicon oxide primer layer, col. 7, line 5 through col. 8, line 9] having a refractive index that is less than that of the substrate and less than that of the transparent conductor pattern and good adhesion in order to reduce unwanted reflections [and thereby increase visible light transmission] when used as a touch panel over a display [Abstract].

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Greanias with the coating [silicon oxide primer layer, col. 7, line 5 through col. 8, line 9] having a refractive index that is less than that of the substrate and less than that of the transparent conductor pattern and good adhesion in order to reduce unwanted reflections when used as a touch panel over a display [Abstract].

Please note that this results in a match for all Applicant's disclosed materials and structure and therefore must match applicant's index of refraction limitations, because applicant's enabling disclosure confirms those index of refraction limitations are met by those materials. Matching structure will match Applicant's performance limitations.

As to claim 2, Greanias in view of Saif, as combined above, disclose the touch screen of claim 1, wherein the filler material has a refractive index matching or nearly matching the refractive index of the coating [Saif, silicon oxide, col. 7, line 5 through col. 8, line 9].

As to claim 3, Greanias in view of Saif, as combined above, disclose the touch screen of claim 1, wherein the filler material is the same as the material of the coating [Saif, silicon oxide, col. 7, line 5 through col. 8, line 9].

As to claim 4, Greanias in view of Saif, as combined above, disclose the touch screen of claim 1, wherein the filler material comprises silicon oxide [Saif, silicon oxide, col. 7, line 5 through col. 8, line 9].

As to claim 5, Greanias in view of Saif, as combined above, disclose the touch screen of claim 1, wherein the filler material is an adhesive [Saif, silicon oxide, col. 7, line 5 through col. 8, line 9].

As to claim 6, Greanias in view of Saif, as combined above, disclose the touch screen of claim 1, wherein the substrate comprises plastic [optional polyester, Greanias col. 16, lines 46-50].

As to claim 7, Greanias in view of Saif, as combined above, disclose the touch screen of claim 1, wherein the substrate comprises polyester [optional polyester, Greanias col. 16, lines 46-50].

As to claim 8, Greanias in view of Saif, as combined above, disclose the touch screen of claim 1, wherein the substrate includes a hardcoat disposed on a surface opposing the coating [Saif, optional, col. 5, lines 50-60].

As to claim 9, Greanias in view of Saif, as combined above, disclose the touch screen of claim 1, wherein the coating comprises silicon oxide [Saif, silicon oxide, col. 7, line 5 through col. 8, line 9].

As to claim 10, Greanias in view of Saif, as combined above, disclose the touch screen of claim 1, wherein the transparent conductor pattern comprises a transparent conductive oxide [Saif, indium tin oxide, col. 7, line 5 through col. 8, line 9].

As to claim 11, Greanias in view of Saif, as combined above, disclose the touch screen of claim 1, wherein the transparent conductor pattern comprises indium tin oxide [Saif, indium tin oxide, col. 7, line 5 through col. 8, line 9].

As to claim 12, Greanias in view of Saif, as combined above, disclose the touch screen of claim 1, wherein the transparent conductor pattern comprises a conductive polymer [optional, col. 4, lines 29-37 and col. 10, lines 10-14].

As to claim 13, Greanias in view of Saif, as combined above, disclose the touch screen of claim 1, wherein the substrate has a refractive index of about 1.6 to 1.7, the transparent conductor pattern has a refractive index of about 1.8 to 2.1, the coating has a refractive index of about 1.4 to 1.5, and the filler material has a refractive index of about 1.4 to 1.8 [known properties of materials used, matches materials claimed by Applicant, Saif, col. 7, line 5 through col. 8, line 9].

As to claim 20, Greanias in view of Saif, as combined above, disclose the touch screen of claim 1, wherein the coating has a thickness selected to substantially reduce reflections of visible light in areas covered by the transparent conductor pattern [Saif, Abstract and col. 7, line 5 through col. 8, line 9].

As to claim 22, Greanias in view of Saif, as combined above, disclose the touch screen of claim 1, wherein the transparent conductor pattern is configured for connecting to controller electronics adapted to determine touch location from signals generated when a conductive touch implement is capacitively coupled to a portion of the pattern [both Greanias and Saif].

As to claims 23 and 24, Greanias in view of Saif, as combined above, disclose the touch screen of claim 22 being arranged so the touch implement is capacitively coupled to the transparent conductor pattern through the substrate [stylus, cover illustration of Greanias, upper set of conductors] or filler material [lower set of conductors].

As to claims 26 and 34, Greanias in view of Saif, as combined above, disclose the touch screen of claim 1 configured to be disposed over an electronic display so that the display can be viewed through the touch screen [Greanias, Abstract and Figure 5 display 18].

As to claim 28, Greanias in view of Saif, as combined above, disclose a touch screen construction comprising: a PET substrate [Greanias, col. 15, lines 40-50]; an silicon oxide layer covering the PET substrate; an array of parallel ITO bars disposed on the silicon oxide layer; and an optically clear pressure sensitive adhesive disposed over and covering the ITO bars, the optically clear pressure sensitive adhesive having a refractive index in the range of 1.4 to 1.8 inclusive.

As to claim 35, a method for reducing the visibility of a patterned transparent conductor in a touch screen comprising the steps of: coating an undercoat material between a substrate and the patterned transparent conductor so that the undercoat material substantially covers the substrate, the undercoat material having a refractive index that is less than that of the substrate and the patterned transparent conductor, and wherein the patterned transparent conductor leaves areas of the undercoat material exposed; and disposing a filler material over the patterned transparent conductor and exposed areas of the undercoat material, the filler material having a refractive index and thickness selected to reduce interfacial reflections of visible light in areas covered by the patterned transparent conductor would have been obvious in view of the structure rejected above.

As to claim 37, the method of claim 35, further comprising the step of forming the patterned transparent conductor would have been obvious in view of the structure rejected above.

Response to Arguments

Applicant's arguments filed on 18 May 2007 have been fully considered but they are not persuasive.

Applicant's ONLY substantive arguments are as follows:

(1) Regarding base claims, Saif discloses use of a titanium oxide.

(2) Regarding base claims, one cannot combine Saif due to the teaching of Greanias.

(3) Rejection of claim 28 should be withdrawn.

(4) Rejection of claim 32 should be withdrawn.

(5) Dependent claims are allowable because they directly or indirectly depend from an allowable base claim.

Examiner's responses to Applicant's ONLY arguments are as follows:

(1) It is respectfully pointed out that Applicant's claims are in comprising format whereby additional layers may read on Applicant's claims.

(2) It is respectfully pointed out that the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

The Primary reference, generally, does not anticipate the need for improvement. Teaching as to the improvement of Saif is found in Saif.

(3) It is respectfully pointed out that Greanias teaches the PET and the ITO while Saif is properly combined to add the silicon oxide layers per rejections above.

(4) It is respectfully pointed out that Greanias teaches the PET and the ITO while Saif is properly combined to add the silicon oxide layers resulting in reduced reflections [and therefore increased light transmission] per rejections above.

(5) It is respectfully pointed out that in so far as Applicant has not argued rejection(s) of the limitations of dependent claim(s), Applicant has acquiesced said rejection(s).

Any references cited but not applied are relevant to the instant Application.

Conclusion

Applicant's amendment necessitated any new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy L. Rude whose telephone number is (571) 272-2301. The examiner can normally be reached on Mon-Thurs.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David C. Nelms can be reached on (571) 272-1787. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Timothy L Rude
Examiner
Art Unit 2871

tlr

ANDREW SCHECHTER
PRIMARY EXAMINER